UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/126,622	07/30/1998	CORMAC HERLEY	10970294-1	9131

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EXAMINER
VU, NGOC YEN T

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 02/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No. 09/126,622	Applicant(s) Cormac HERLEY
	Examiner Ngoc-Yen VU	Art Unit 2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE __3__ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _Jul 30, 1998_

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-9_ is/are pending in the applica

    4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-9_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _Jul 30, 1998_ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a)☐ All b) ☐ Some* c) ☐None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: _____

DETAILED ACTION

Drawings

1.   The drawings are objected to because the proper symbol or legend must be provided for

all blocks shown in Figure 1 in accordance with 37 CFR 1.84 N,O. Correction is required.

Specification

2.   The title of the invention is not descriptive. A new title is required that is clearly indicative

of the invention to which the claims are directed.

Claim Objections

3.   Claims 3 and 6 are objected to because of the following informalities:

Claim 3: line 3, change "Inputting" to --inputting--.

Claim 6: line 4, change "Inputting" to --inputting--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (US #5,838,834).

Regarding claims **1-2**, Saito teaches a method of processing images in a digital camera comprising the steps of inputting a raw image (col. 6 lines 38-65); generating from the raw image a first compressed image data suitable for reproducing the image at a first quality level (col. 6 lines 66 - col. 7 line 64); generating from the raw image a second compressed image data (col. 6 lines 66 - col. 7 line 64). Claim 1 differs from Saito in that the claim further requires that the combination between the first and second compressed image data produces the image at a second, higher quality level. Although Saito does not explicitly teach that the image data stored in a compressed data memory 15 is reproduced at a higher quality level, Saito does teach that quantize coefficients from the lower frequency components to the higher frequency components are assigned to several stages (col. 7 lines 4+) in a progressive coding method. Saito further teaches in column 1, lines 51+, that in progressive coding reproduced images having better resolution is reproduced sequentially. In light of the teaching from Saito, it would have been obvious to one of ordinary skill in the art to modify the progressive coding taught in Saito by reproducing images having a higher quality level without degradation caused by quantization errors. It is noted that the progressive coding taught in Saito, DCT quantization and Huffman coding, conforms with JPEG compression/decompression.

Regarding claim **3**, Saito teaches a method of processing images in a digital camera comprising the steps of inputting a raw image (col. 6 lines 38-65); generating from the raw image

a first compressed image data suitable for reproducing the image at a first quality level (col. 6 lines 66 - col. 7 line 64); generating from the raw image a second compressed image data (col. 6 lines 66 - col. 7 line 64). Claim 1 differs from Saito in that the claim further requires that the combination between the first and second compressed image data produces the image at a second, higher quality level. Although Saito does not explicitly teach that the image data stored in a compressed data memory 15 is reproduced at a higher quality level, Saito does teach that quantize coefficients from the lower frequency components to the higher frequency components are assigned to several stages (col. 7 lines 4+) in a progressive coding method. Saito further teaches in column 1, lines 51+, that in progressive coding reproduced images having better resolution are reproduced sequentially. In light of the teaching from Saito, it would have been obvious to one of ordinary skill in the art to modify the progressive coding taught in Saito by reproducing images having a higher quality level without degradation caused by quantization errors. It is noted Saito teaches that the compressed image data having different quality level can be selectively stored in a compressed data memory according to the available memory space (col. 5 lines 4+; col. 7 lines 4+; col. 8 lines 7+; col. 9 lines 10+; col. 15 lines 42+; col. 17 lines 1+; col. 18 lines 38+).

As to claims **4-5**, Saito shows quantization coefficients in the progressive coding method (Figs. 5-6, 14, 16).

6.   Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (US #5,838,834) in view of Yamagata (US #6,261,106).

Regarding claim **6**, Saito teaches a method of processing images in a digital camera

comprising the steps of inputting a raw image (col. 6 lines 38-65); generating from the raw image

a first compressed image data suitable for reproducing the image at a first quality level (col. 6

lines 66 - col. 7 line 64); generating from the raw image a second compressed image data (col. 6

lines 66 - col. 7 line 64). Claim 1 differs from Saito in that the claim further requires that the

combination between the first and second compressed image data produces the image at a second,

higher quality level. Although Saito does not explicitly teach that the image data stored in a

compressed data memory 15 is reproduced at a higher quality level, Saito does teach that quantize

coefficients from the lower frequency components to the higher frequency components are

assigned to several stages (col. 7 lines 4+) in a progressive coding method. Saito further teaches

in column 1, lines 51+, that in progressive coding reproduced images having better resolution are

reproduced sequentially. In light of the teaching from Saito, it would have been obvious to one of

ordinary skill in the art to modify the progressive coding taught in Saito by reproducing images

having a higher quality level without degradation caused by quantization errors. It is noted Saito

teaches that the compressed image data having different quality level can be selectively stored in a

compressed data memory according to the available memory space (col. 5 lines 4+; col. 7 lines

4+; col. 8 lines 7+; col. 9 lines 10+; col. 15 lines 42+; col. 17 lines 1+; col. 18 lines 38+).

Claim 6 differs from Saito in that the claim further requires that if insufficient space is

available in the image storage device to store the first compressed image data set, the second

compressed image data sets will be released to make space in the image storage device. The

limitation is well known in the art as shown in Yamagata. In the same field of endeavor,

Yamagata teaches a digital camera having image data selectively compressed and stored in a

recording medium (IC card M). Yamagata further teaches that compressed image data can be

selectively deleted to increase total capacity of the memory card (col. 1 lines 35+). In light of the

teaching from Yamagata, it would have been obvious to one of ordinary skill in the art to modify

the image processing apparatus taught in Saito by allowing compressed image data to be

selectively released so as increasing the total remaining capacity of the compressed data memory.

As to claims 7-9, Yamagata teaches a frame forward/backward buttons 15 (Fig. 1)

allowing image files to be selected for further compression or deletion.

Conclusion

7.   **Any response to this office action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

(for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA.,

Sixth Floor (Receptionist).

8.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to **Ngoc-Yen Vu** whose telephone number is (703) 305-4946. The examiner

can normally be reached on Mon - Fri from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Wendy Garber, can be reached on (703) 305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the customer service office whose telephone number is (703) 306-0377.

NYV
01/28/2002

Ngoc-Yen Vu
Patent Examiner
Group Art Unit 2612